IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS

Applicant(s)	Judd	**APPEAL BRIEF**
Serial No.	10/782,519	
Filing Date	2/18/2004	
Confirmation No.	2145	
Examiner Name	JAKOVAC, RYAN J	
Group Art Unit	4712	
Attorney Docket No.	H0006282-5435	
Title: SYSTEMS AND METHOD FOR ENCODING AND DECODING DATA MESSAGES		

1. Introduction

On August 13, 2008, Appellant filed a notice of appeal from the final rejection of claims set forth in the Office Action mailed May 14, 2008. In view of the Appeal Brief filed on October 13, 2008, prosecution was reopened with the Office Action mailed January 2, 2009. On March 27, 2009, Appellant filed a notice of appeal of the rejection of claims 1-39 set forth in the Office Action mailed January 2, 2009. The previously paid Appeal Brief fee is being applied to this Appeal Brief.

2. Real Party in Interest

The real party in interest in the above-captioned application is the assignee Honeywell International Inc.

3. Related Appeals and Interferences

There are no other appeals or interferences known to Appellants which will have a bearing on the Board's decision in the present appeal.

4. Status of the Claims

Claims 1-39 are pending in the application and are the subject of this appeal. In the Final Office Action mailed January 2, 2009, claims 1-39 were finally rejected under 35 U.S.C. §103(a).

5. Status of Amendments

An amendment after the Final Office Action dated January 2, 2009 was filed on March 2,

2009. An Advisory Action was mailed on March 11, 2009 in which the Examiner indicated that the amendment filed on March 2, 2009 was entered into the record.

6. Summary of Claimed Subject Matter

Pursuant to 37 C.F.R. §41.37(c)(1)(v), Appellant provides the following concise explanation of the subject matter defined in each independent claim with reference to the specification by page and line number and to the drawings by reference number. Appellant submits that the citations to the specification and drawings are not intended to be exhaustive and that other support for the various claims may also be found throughout the specification and drawings.

A. Claim 1

Claim 1 is directed to a method of communicating data messages. An exemplary method of communicating ASN.1 messages is described at least at page 6, line 8 to page 7, line 11, and is shown in Fig. 3. The method of claim 1 comprises receiving a message formatted according to Abstract Syntax Notation One (ASN.1) (block 82); and decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file (block 88).

B. Claim 10

Claim 10 is directed to a system for communicating data messages. An exemplary system is described at least at page 4, line 6 to page 6, line 5, and is shown in Fig. 2. The system of claim 10 comprises a means for receiving a message formatted according to Abstract Syntax Notation One (ASN.1) (26); a memory (22) for storing and accessing a configuration information file (CIF), wherein the CIF is a table-driven data file; and a means for decoding the received message based on the stored CIF (24).

C. Claim 19

Claim 19 is directed to a system for communicating data messages. An exemplary system is described at least at page 4, line 6 to page 6, line 5, and is shown in Fig. 2. The system of claim 19 comprises a receiver (26) configured to receive a message formatted according to Abstract Syntax Notation One (ASN.1) using an ASN.1 compatible encoding rules; a memory (22) configured to store a configuration

information file (CIF), wherein the CIF is a table-driven data file; and a processor (24) coupled to the receiver and the memory, the processor being configured to decode the received message based on the stored CIF.

D. Claim 30

Claim 30 is directed to a method of communicating data messages. An exemplary process corresponding to the method of claim 30 is described at least at page 8, lines 14-18. The method of claim 30 comprises encoding a message formatted according to ASN.1 wherein encoding is based on a previously stored configuration information file (CIF) (pg. 8, lines 14-15), the CIF being a table-driven data file (pg. 6, lines 15-16); and transmitting the encoded message (pg. 8, lines 16-18).

E. Claim 35

Claim 35 is directed to a system of communicating data messages. An exemplary system is described at least at page 4, line 6 to page 6, line 5, and is shown in Fig. 2. The system of claim 35 comprises a means for encoding a message formatted according to ASN.1 (24), wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and a means for transmitting the encoded message (26).

7. Grounds of Rejection to be Reviewed on Appeal

Whether claims 1-8, 10-17, 19-27, 30-33, and 35-38 are obvious under 35 U.S.C. §103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Schwartz et al. (U.S. Patent No. 7,437,408)?

Whether claims 9, 18, 28, 34 and 39 are obvious under 35 USC § 103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Schwartz et al. (U.S. Patent No. 7,437,408) and further in view of Applicant's Admitted Prior Art (U.S. Publication No. 2005/0181787)?

Whether claim 29 is obvious under under 35 USC § 103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Schwartz et al. (U.S. Patent No. 7,437,408) and further in view of Allison et al. (U.S. Patent No. 5,917,900)?

8. Arguments

A. Rejections of claims 1-39 under 35 U.S.C. §102(b)

1. The Applicable Law

35 U.S.C. § 103 provides in relevant part:

> Conditions for patentability, non-obvious subject matter.
>
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

In its landmark decision interpreting this section of the Patent Act, the Supreme Court has said:

> Under 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966).

The Supreme Court recently reaffirmed the approach to determining obviousness as set out in Graham. KSR Intern. Co. v. Teleflex Inc., 550 U.S. 398 (2007), 82 U.S.P.Q.2d 1385, 1391 (S.Ct. 2007) (citing Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966)). The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR, 550 U.S. 398, 82 USPQ2d at 1396 noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.

To establish a prima facie case of obviousness, the prior art reference (or references when

combined) must teach or suggest all the claim limitations. MPEP §2143. However, obviousness is not demonstrated by merely showing that each element was independently known in the prior art. KSR, 550 U.S. 398, 82 USPQ2d at 1396. The Supreme Court also noted in KSR that if the actual application of the technique would have been beyond the skill of one of ordinary skill in the art, then using the technique would not have been obvious. KSR, 550 U.S. 398, 82 USPQ2d at 1396.

When applying 35 U.S.C. §103(a), the claimed invention must be considered as a whole; the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; the references must be viewed without the benefit of impermissible hindsight afforded by the claimed invention and a reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Co., Inc.,* 786 F.2d 1136, 1143 n.5 (Fed. Cir. 1986).

Federal Circuit precedent describes the relative burden of the applicant and the Patent Office on the issue of Obviousness. The Federal Circuit has held that

> During patent examination the PTO bears the initial burden of presenting a prima facie case of unpatentability . . . If the PTO fails to meet this burden, then the applicant is entitled to the patent. However, when a *prima facie* case is made, the burden shifts to the applicant to come forward with evidence and/or argument supporting patentability.

In re Glaug, 283 F.3d 1335, 1338 (Fed.Cir. 2002).

2. 35 U.S.C. § 103(a) rejection analysis

a. Claims 1-8, 10-17, 19-27, 30-33, and 35-38

Claims 1-8, 10-17, 19-27, 30-33, and 35-38 were rejected as being obvious under 35 U.S.C. §103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Schwartz et al. (U.S. Patent No. 7,437,408).

Claim 1 recites:

> A method comprising:
> a. receiving a message formatted according to Abstract Syntax Notation One (ASN.1); and

> b. decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file.

Nothing in Tidwell or Schwartz, taken alone or together, teaches or suggests "decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file." In addressing the above limitation, the Examiner has apparently equated ASN.1 encoding/decoding rules with a configuration information file (CIF). Final Office Action (FOA) pg. 3. Although, a CIF is used to encode/decode messages using ASN.1 compatible encoding rules, the encoding rules themselves are not a CIF. The encoding/decoding rules are encoding/decoding formats defined as part of an ASN.1 standard which are implemented in a system communicating ASN.1 defined messages.

For example, the present specification states "In order to be communicated via a data communications service (e.g., sending a message from one station to another, like e-mail), the messages are encoded and then decoded on the receiving side using encoding/decoding rules." Paragraph [0003]. The present specification further discusses encoding and processing "downlink messages using the PER based on the message schema within the CIF. Certain messages may be defined using some other ASN.1 compatible encoding rule such as Basic Encoding Rules (BER)." Paragraph [0037]. Similarly, with respect to encoding rules, Tidwell states

> ASN.1 provides a standardized set of rules for representing instances of data structures which can then be encoded into a stream of bytes according to a predefined set of encoding rules. Although the most widely used encoding rules are the 'Basic Encoding Rules' or BER, it should be understood that other encoding rules, e.g., Packed Encoding Rules (PER), may also be used.

Tidwell Para. [0024].

Prior approaches discussed in the present application implement the encoding/decoding rules by feeding ASN.1 defined messages

> through an ASN.1 compiler to obtain compilable or linkable entities (e.g., C source file structures and modules, object files, etc.). The entities are compiled and linked with the other operational software components to obtain resultant software executable, which includes the ability to decode and encode messages that were defined in the original ASN.1 message schema.

Paragraph [0004].

Similar to the prior approaches discussed in the present application, Tidwell also discusses implementing encoding/decoding rules through programming routines. In particular, Tidwell states:

> The ADEP 310 translates a data structure within the application program 305 into a stream of bytes in accordance with an ASN.1 specification and a set of encoding rules. The encoding rules can include, but are not limited to, BER and PER … ***In order to perform this function, the ADEP 310 includes routines written in the same programming language*** as the application program 305 for encoding a data structure produced by the application program 305 into an ASN.1 message and decoding an ASN.1 message into a data structure understandable by the application program. Para. [0034] (emphasis added)

Tidwell further discusses the ADEP

> can be produced by an ASN.1 compiler which converts an ASN.1 specification, such as that in Table 2, into encoding and decoding routines in the programming language of the application program 305. Where a high-level programming language (for example, C, C++, FORTRAN) is used to write the application program, the output of the compiler is source code which is again compiled with the application program 305.

Pg. 7 paragraph [0035] (emphasis added). Thus, as with the prior approaches discussed in the present application, Tidwell implements encoding/decoding rules through "compilable or linkable entities" such as "source code."

In contrast to implementing the encoding/decoding rules in source code, the present application implements the encoding/decoding rules using a CIF. In particular, the present application states

> The CIF ***defines uplink message definition*** based on the ASN.1 schema. The CIF is tree-based and table driven to ***define message syntax***. The CIF also ***defines what actions are to be taken*** or can be taken with the message (e.g. display including format, print including format, responses, pilot actions, etc.)

paragraph [0031] emphasis added. Although Tidwell and the present application both discuss ASN.1 encoding/decoding rules, the encoding/decoding rules are implemented differently. In particular, the CIF, as described and claimed in the present application, is used to ***implement*** the encoding/decoding rules. In other words, encoding/decoding rules are not a CIF, but are implemented through a CIF in claim 1.

The Examiner acknowledged that nothing in Tidwell teaches or suggests "wherein the CIF is a table-driven data file." In addressing this limitation, the Examiner relied on Schwartz in

asserting that "the MAG module is a table driven and performs transformations on input data using a table structure." FOA 1/2/2009 pg. 3. Appellant respectfully asserts that the MAG module in Schwartz is not a CIF as described in the present application and claimed in claim 1. Although, Schwartz discusses the use of a table structure, not all table structures are a configuration information file. In particular, as discussed above, "The CIF ***defines uplink message definition*** based on the ASN.1 schema. The CIF is tree-based and table driven to ***define message syntax***. The CIF also ***defines what actions are to be taken*** or can be taken with the message (e.g. display including format, print including format, responses, pilot actions, etc.)" paragraph [0031] emphasis added.

However, the MAG module in Schwartz is only discussed in the context of "using the format specification to parse the message ***into its various fields*** and reading the information from the various fields." Col. 16, lines 61-63 emphasis added. Thus, the MAG module does not perform the functions of a CIF. For example, nothing in Schwartz teaches or suggests that the MAG module, "defines what actions are to be taken or can be taken with the message." Thus, the MAG module does not teach or suggest a CIF as described and claimed.

Furthermore, ASN.1 notation does not use pre-defined structured fields like those discussed in Schwartz where the type of data is dependent on the order (as shown in Fig. 9 of Schwartz). For example, in ASN.1 notation, the message itself can define the type of variable and length of the variable as well as the value. *See* John Larmouth, *ASN.1 Complete*, pages 29-30 (Open Systems Solutions 1999) available at <http://www.oss.com/asn1/larmouth.html>. Thus, one of ordinary skill in the art would not be motivated to modify Tidwell based on Schwartz since the function of the MAG module in Schwartz is directed towards transforming data formats having pre-defined structured fields whereas ASN.1 does not use pre-defined structured fields in which the type of data is dependent on the order.

In addition, the discussion of encoding/decoding rules in Tidwell does not teach or suggest a configuration information file, as discussed above. Rather, the encoding/decoding rules in Tidwell are implemented through source code, as discussed above. One of skill in the art would not be motivated to replace or modify the source code discussed in Tidwell with the MAG module of Schwartz since doing so would negatively affect the operation of Tidwell. In particular, since ASN.1 messages do not have pre-defined structured fields, use of the MAG

module from Schwartz in Tidwell would not enable Tidwell to encode/decode ASN.1 messages. Thus, one of skill in the art would not be motivated to combine the teachings of Schwartz and Tidwell as asserted by the Examiner.

The MPEP states "To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP §2143. However, for at least the reasons stated above, neither Tidwell or Schwartz, taken alone or together, teaches or suggests "decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file".

Claims 2-8 depend from claim 1 and, thus, are allowable for at least the reasons stated above with respect to claim 1.

In rejecting independent claims 10, 19, 30, and 35, the Examiner referred to arguments similar to those made with respect to claim 1. Accordingly, Appellant asserts that the arguments described above with respect to claim 1 are also applicable to claims 10, 19, 30, and 35. For at least the reasons stated above, claims 10, 19, 30, and 35 are not obvious over Tidwell in view of Schwartz.

Claims 11-17 depend from claim 10. Claims 20-27 depend from claim 19. Claims 31-33 depend from claim 30 and claims 36-38 depend from claim 35. Consequently, claims 11-17, 20-27, 31-33, and 36-38 are allowable for at least the reasons stated above with respect to the respective independent claims 10, 19, 30, and 35. Applicant requests that the rejection of claim 10-12, 14, 15, 17, 19-21, 23-25, 27, 30, 31, 33, 35, 36, and 38 be withdrawn.

For the reasons stated above, Appellant respectfully requests the reversal of the rejection of claims 1-8, 10-17, 19-27, 30-33, and 35-38.

b. Claims 9, 18, 28, 34 and 39

Claims 9, 18, 28, 34, and 39 were rejected as being obvious under 35 USC § 103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Schwartz et al. (U.S. Patent No. 7,437,408) and further in view of Applicant's Admitted Prior Art (U.S. Publication No. 2005/0181787).

Claims 9, 18, 28, 34, and 39 depend from claims 1, 10, 19, 30, and 35, respectively, and inherit the limitations of the respective independent claim. As stated above, nothing in Tidwell

or Schwartz teaches or suggests "a configuration information file (CIF), wherein the CIF is a table-driven data file." The discussion of ACARS and ATN in the present application does not cure the defects in Tidwell and Schwartz. Therefore, for at least the reasons stated above, claims 9, 18, 28, 34 and 39 are not obvious over Tidwell in view of Schwartz in further view of Applicants' admitted prior art. Appellant respectfully requests that the rejection be reversed.

c. Claim 29

Claim 29 was rejected as being obvious under under 35 USC § 103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Schwartz et al. (U.S. Patent No. 7,437,408) and further in view of Allison et al. (U.S. Patent No. 5,917,900).

Claim 29 depends from claim 19 and, thus, inherits the limitations of claim 19. As discussed above, nothing in Tidwell or Schwartz teaches or suggests "wherein the CIF is a table-driven data file." Nothing in Allison cures this defect in Tidwell and Schwartz. Therefore, for at least the reasons stated above, claim 29 is not obvious over Tidwell in view of Schwartz in further view of Allison. Appellant respectfully requests that the rejection be withdrawn.

Respectfully submitted,

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Date: May 27, 2009

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CLAIMS APPENDIX

1. A method comprising:

a. receiving a message formatted according to Abstract Syntax Notation One (ASN.1); and

b. decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file.

2. The method of claim 1, wherein the received message is formatted according to an ASN.1 compatible encoding rule.

3. The method of claim 1, wherein the CIF includes schema of the ASN.1 formatted message.

4. The method of claim 3, wherein the CIF further includes a means for defining new messages without updating associated operational software.

5. The method of claim 1, further comprising: c. encoding a message formatted according to ASN.1, wherein encoding is based on the CIF; and d. transmitting the encoded message.

6. The method of claim 5, wherein encoding the message is performed according to an ASN.1 compatible encoding rule.

7. The method of claim 5, wherein a-d are performed on an aircraft.

8. The method of claim 7, wherein transmitting and receiving are performed according to a datalink protocol.

9. The method of claim 8, wherein the datalink protocol includes an aeronautical datalink protocol.

10. A system comprising:

a means for receiving a message formatted according to Abstract Syntax Notation One (ASN.1);

a memory for storing and accessing a configuration information file (CIF), wherein the CIF is a table-driven data file; and

a means for decoding the received message based on the stored CIF.

11. The system of claim 10, wherein the received message is formatted according to an ASN.1 compatible encoding rule.

12. The system of claim 10, wherein the CIF includes schema of the ASN.1 formatted message.

13. The system of claim 12, wherein the CIF further includes a means for defining processing of a message without updating associated operational software.

14. The system of claim 10, further comprising: a means for encoding a message formatted according to ASN.1, wherein encoding is based on the CIF; and a means for transmitting the encoded message.

15. The system of claim 14, wherein the means for encoding encodes the message according to an ASN.1 compatible encoding rule.

16. The system of claim 14, wherein the system is located on an aircraft.

17. The system of claim 16, wherein transmitting and receiving are performed according to a datalink protocol.

18. The system of claim 17, wherein the datalink protocol includes an aeronautical datalink protocol.

19. A system comprising:

a receiver configured to receive a message formatted according to Abstract Syntax Notation One (ASN.1) using an ASN.1 compatible encoding rules;

a memory configured to store a configuration information file (CIF), wherein the CIF is a table-driven data file; and

a processor coupled to the receiver and the memory, the processor being configured to decode the received message based on the stored CIF.

20. The system of claim 19, wherein the ASN.1 compatible encoding rule includes at least one of Basic Encoding Rules (BER) or Packed Encoding Rules (PER).

21. The system of claim 19, wherein the CIF includes schema of the ASN.1 formatted message.

22. The system of claim 21, wherein the CIF further includes a means for defining processing of a message without updating associated operational software.

23. The system of claim 19, wherein the processor comprises a component configured to encode a message formatted according to ASN.1 based on the CIF.

24. The system of claim 23, further comprising a transmitter configured to transmit the encoded message.

25. The system of claim 23, wherein the component configured to encode encodes the message according to an ASN.1 compatible encoding rule.

26. The system of claim 19, wherein the system is located on an aircraft.

27. The system of claim 26, wherein the receiver and transmitter perform data reception and transmission according to a datalink protocol.

28. The system of claim 27, wherein the datalink protocol includes an aeronautical datalink protocol.

29. The system of claim 27, wherein the datalink protocol includes the Transmission Control Protocol/Internet Protocol (TCP/IP).

30. A method comprising: a. encoding a message formatted according to ASN.1, wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and b. transmitting the encoded message.

31. The method of claim 30, wherein encoding the message is performed according to an ASN.1 compatible encoding rule.

32. The method of claim 30, wherein a and b are performed on an aircraft.

33. The method of claim 32, wherein transmitting and receiving are performed according to a datalink protocol.

34. The method of claim 33, wherein the datalink protocol includes an aeronautical datalink protocol.

35. A system comprising:

a means for encoding a message formatted according to ASN.1, wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and

a means for transmitting the encoded message.

36. The system of claim 35, wherein the means for encoding encodes the message according to an ASN.1 compatible encoding rule.

37. The system of claim 35, wherein the system is located on an aircraft.

38. The system of claim 37, wherein transmitting and receiving are performed according to a datalink protocol.

39. The system of claim 38, wherein the datalink protocol includes an aeronautical datalink protocol.

EVIDENCE APPENDIX

There is nothing to present in the Evidence Appendix.

RELATED PROCEEDINGS APPENDIX

There is nothing to present in the Related Proceedings Appendix.